

Alberta Wheat



has been one of the province's most important crops since the early 1900s when settlers first began clearing the land for food production.



Canada



Wheat is Canada's largest acreage crop and is our largest agricultural export. Canada is one of the top five wheat exporting countries in the world, and is the largest producer of high-protein milling hard red spring wheat. The quality, nutritional value and versatility of Canadian grains make them essential ingredients for the finest foods and beverages in the world.



Wheat in Alberta

Alberta's agriculture industry is the largest renewable industry in the province. Alberta produces about 9.4 million tonnes of wheat on approximately 6.7 million acres every year. Wheat is Alberta and Canada's largest agricultural export.

Canada's Grading System

Canadian wheat has a worldwide reputation for uniformity and consistency. Buyers have learned, from shipment to shipment and from year to year, that they can rely on the quality of Canadian wheat. Canadian wheat is graded by the Government of Canada's Canadian Grain Commission (CGC). The CGC defines grading standards for grain crops and ensures that these standards are rigorously applied to every harvest. The grading system is responsive to customers' end-use requirements for grain and operates on a foundation of scientific support.

Wheat can be purchased in different classes and by grade. Grade designations are based on milling and final product specifications. Millers, therefore, can count on consistently produced high quality food products that meet consumer expectations. Millers purchase on the basis of flour yield, protein content, gluten properties, baking absorption, loaf volume, and other criteria.

Food Safety and Quality

The CGC, in addition to grading, also monitors grain safety. The CGC regularly monitors chemical residues, mycotoxins and trace elements, thereby providing customers with the assurance that grain shipments from Canada will meet the most stringent tolerances. Alberta's grain is among the safest in the world, and our cold winter climate also provides crops with some natural protection against insects and disease.





**Alberta produces
10 classes of
wheat:**

- **Canada Western Red Spring (CWRS)**
- **Canada Western Amber Durum (CWAD)**
- **Canada Western Soft White Spring (CWSWS)**
- **Canada Prairie Spring Red (CPSR)**
- **Canada Prairie Spring White (CPSW)**
- **Canada Western Extra Strong (CWES)**
- **Canada Western Red Winter (CWRW)**
- **Canada West Hard White Spring (CWHWS)**
- **Canada Northern Hard Red (CNHR)**
- **Canada Western Special Purpose (CWSP)**



Classes of Alberta Wheat

Alberta produces ten classes of wheat. Each class is determined by its hardness, the color of its kernels and its planting time. The classes of wheat have different characteristics related to milling, baking or other food uses. Approximately 85% of Alberta's wheat production is Canadian Western Red Spring and Canadian Western Amber Durum.

Canada Western Red Spring (CWRS) -

In the bread baking industry, hard red spring wheat flour can be used to bake different kinds of bread, namely high volume pan breads, hearth breads and steam breads. CWRS is an excellent gluten strength wheat, which makes it ideal for baking high-rise bread. Most of Canada's production of hard red spring wheat is used for the production of high volume pan breads. Strong yet mellow gluten properties and very high water absorption properties characterize flour milled from the top grades of CWRS. Some customers use Alberta hard red spring wheat flour in blends to increase the strength and/or water absorption of flours normally used for hearth breads. Other customers import this wheat to blend with their weaker gluten strength wheat for the production of steam breads and noodles.



Canada Western Amber Durum

(CWAD) - Alberta produces some of the highest quality amber durum wheat in the world. It is used to make high quality pasta and pasta products. Top grades of durum provide high levels of semolina with bright yellow colour. We now have two levels of durum strength available with Extra Strong Types being segregated for quality assurance purposes. Some customers use it for couscous and durum bread. Canadian amber durum wheat is often mixed with other durum wheats to raise their quality.

Canada Western Soft White Spring

(CWSWS) - This wheat is used in the manufacturing of cookies, biscuits, cakes, crackers, pies, prepared mixes and ready-to-eat cereals. This wheat is also used in baby foods, soups, cones, wafers, pizza batters and pretzels. Soft white wheat flour is incorporated in a greater range of products than any other class of wheat.

Canada Prairie Spring Red (CPSR) -

CPSR is used as ingredients for such products as breads, flat breads, pizza crusts and other products such as crackers and steam buns. It has medium to strong dough properties with medium protein and hard kernels. It can also be used in animal feed and ethanol production. This wheat has been developed to compete with Hard Red Winter Wheat with consistent performance.

Canadian Prairie Spring White

(CPSW) - CPSW wheat is a medium-strength wheat suitable for the production of various types of flat breads, noodles, chapatis and related products. It can also be used in ethanol production.

Canada Western Extra Strong

(CWES) - This wheat can be used for feed and some food products. It is used in specialty products when high gluten strength is needed. It can also be mixed with other varieties of wheat to increase the flour's gluten strength. Frozen dough made with extra strong flour has a much longer shelf life than dough made with other varieties.

Canada Western Red Winter

(CWRW) - CWRW select varieties are popular for their milling yield and dough strength as well as flour colour properties. They can be used to make French-type hearth breads, pancake flour, noodles, pan and steamed breads.

Canada Western Hard White Spring

(CWHWS) - With a superior milling quality which produces flour with excellent white colour, CWHWS wheat can be used for bread and noodle production. It can also be used to bake white bread with the nutritional characteristics of brown whole wheat bread, without bleaching the flour.

Canada Northern Hard Red (CNHR) -

CNHR wheat is very good milling quality with medium gluten strength. It can be used to produce hearth breads, flat breads and noodles.

Canada Western Special Purpose

(CWSP) - Varieties in the Canada Western Special Purpose wheat class are typically high-yielding. Due to the combination of high starch and low protein, they are most suitable for uses such as ethanol products or animal feed.





Research and Innovation

Throughout Canada, grain producers, processors, exporters and scientists are committed to the development of new varieties, to conducting agronomic and processing research and to providing top quality innovative products.

The CGC's Grain Research Laboratory conducts research on:

Durum wheat quality - to address changes in a) modern processing technology b) the introduction of new pasta and other semolina products and c) the demands of discriminating buyers, processors and consumers.

Bread wheat - to determine how Canadian wheat flours behave in response to processing conditions and additives used in the baking industry, and to determine how major components such as protein are related to this performance.

Milling - to evaluate the milling performance of Canadian breeding lines, export cargoes and new crops.

The Canadian International Grains Institute (CIGI) supports a broad range of technical activities in areas such as biofuels, feeds, and milling and plays a key role in ensuring Canada remains a market leader for its grain production.

The Alberta government supports applied research projects related to crops and environmentally sustainable agriculture through the Agricultural Research and Extension Council of Alberta.

Research is also conducted through Alberta's Crop Industry Development Fund (ACIDF). The fund supports projects ranging from variety development to bio-industrial applications to breakthrough technologies. ACIDF also support the innovative Wheat Breeding Program at the University of Alberta in Edmonton. This program has a number of new lines that incorporate excellent disease resistance while maintaining high quality standards in Hard Red and Canada Prairie Spring Wheat varieties.





Alberta ...

A Reliable Source of Wheat

Alberta exports wheat to more than 70 countries worldwide, averaging approximately 6.8 million tonnes per year. Our customers can depend on consistent quality and reliable delivery.

Alberta has an open business environment and natural advantages that contribute to our strength as a major exporter of primary commodities and processed products to the global marketplace. The province has world-class infrastructure which makes it an attractive location in which to invest. Alberta's strengths include:

- Extensive transportation networks
- Low corporate taxes
- A young, educated workforce
- Programs and services that support primary agriculture and agri-food processors
- World-class research and development
- Quality education and training facilities

Alberta's ability to produce high quality wheat and other ingredients for processed foods makes it an ideal location to produce grain-based products.

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